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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/797,223	03/10/2004	Nicholas James Adams	TS5581 (US)	4123
23632 7590 12/16/2009 SHELL OIL COMPANY P O BOX 2463 HOUSTON, TX 772522463				
EXAMINER				
SINGH, PREM C				
ART UNIT		PAPER NUMBER		
1797				
MAIL DATE		DELIVERY MODE		
12/16/2009		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary**Application No.**

10/797,223

Applicant(s)

ADAMS, NICHOLAS JAMES

Examiner

PREM C. SINGH

Art Unit

1797

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 October 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SG-08)
- Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114 was filed in this application after a decision by the Board of Patent Appeals and Interferences, but before the filing of a Notice of Appeal to the Court of Appeals for the Federal Circuit or the commencement of a civil action. Since this application is eligible for continued examination under 37 CFR 1.114 and the fee set forth in 37 CFR 1.17(e) has been timely paid, the appeal has been withdrawn pursuant to 37 CFR 1.114 and prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on 10/19/2009 has been entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Van Ballegoy et al (WO 00/29511) ("Ballegoy") in view of Chen et al (Molecular Transport and Reaction in Zeolites, Table 2.1, page 11, John Wiley and Sons, 1994) ("Chen") and evidenced by Young (US Patent 3,864,282) ("Young").

4. With respect to claim 1, Ballegoy invention discloses a process for catalytic dewaxing (See title). Ballegoy discloses, "The invention relates to a process for the catalytic dewaxing of a hydrocarbon feed comprising waxy molecules by contacting the hydrocarbon feed under catalytic dewaxing conditions with a catalyst composition comprising metallosilicate crystallites, a binder, and a hydrogenation component." (Page 1, lines 1-6). "The most preferred binder is silica." (Page 6, lines 12-13). Ballegoy also discloses that the hydrogenation component is platinum in a range of 0.1 to 5% by weight (See page 6, lines 14-34), wherein the zeolite crystallites have an average crystal size smaller than 1 micron (See page 12, lines 1-10; page 20, Table II). Ballegoy discloses that the weight ratio of the metallosilicate crystallites and the binder is between 5:95 and 35:65 (See page 5, lines 20-21). Ballegoy further adds, "More preferably the zeolite crystallites have a constraint index of between 2 and 12." (Page 8, lines 3-4). Ballegoy also discloses, "The cut point(s) of the distillate fractions is/are

selected such that each product distillate recovered has the desired properties for its envisaged application. For lubricating base oils, the cut point will normally be at least 280°C and will normally not exceed 400°C, the exact cut point being determined by the desired product properties, such as volatility, viscosity, viscosity index, and pour point.” (Page 17, lines 14-21).

Although Ballegoy invention does not appear to specifically disclose how average crystal size was determined, it would have been obvious to one skilled in the art at the time of invention to use any standard technique, including XRD line broadening technique as claimed, because any standard analytical technique is expected to be equally effective. It is evidenced by Young which is drawn to a process of producing zeolites with very small crystal sizes (See abstract). Young discloses measuring the zeolite crystal size by broadening of the XRD line (See column 4, lines 50-52).

Ballegoy invention uses MTW-type crystallites like ZSM-12 (See page 7, lines 25-28) but does not appear to specifically disclose pores consisting of 12 oxygen atoms.

Ballegoy invention does not appear to specifically disclose that the gas oil yield is higher than the lower boiling fraction.

Chen reference discloses in Table 2.1 that MTW crystallites have channel size 12. This indicates that the MTW disclosed by Ballegoy will also inherently have channel size 12.

Since Ballegoy invention discloses that the exact cut point of the distillates is determined by the desired product properties and the lubricating base oil has a boiling range of 280°C to 400°C and also since Ballegoy invention uses a feed with a boiling

range of 202 to 587°C (Page 28, Table IX), it would have been obvious to one skilled in the art at the time the invention was made to modify Ballegoy invention and cut a lubricating base oil and a larger portion of gas oil as compared to the lighter fraction because gas oil is a more value-added product as compared to the lighter components.

5. With respect to claims 2 and 3, Ballegoy invention discloses, "The feed oil will suitably contain between about 1% and up to 100% of these waxy compounds." (Page 3, lines 4-5).
6. With respect to claim 4, Ballegoy invention discloses, "Examples of feeds having relatively high amounts of waxy compounds areand slack waxes." (Page 3, lines 27-32).
7. With respect to claim 5, Ballegoy invention discloses in Table I (Page 18) nitrogen content of hydrocracked waxy raffinate feed to be less than 1 ppmw.
8. With respect to claims 6 and 7, Ballegoy invention discloses, "More preferably the zeolite crystallites have a constraint index of between 2 and 12." (Page 8, lines 3-4).
9. With respect to claim 8, Ballegoy invention discloses, "A further preferred class of aluminosilicate zeolite crystallites are of the MTW-type." (Page 7, lines 25-26).

10. With respect to claim 9, Ballegoy invention discloses, "The weight ratio of the metallosilicate crystallites and the binder is between 5:95 and 35:65." (Page 2, lines 2-3).

Response to Arguments

11. Applicant's arguments filed 10/19/2009 have been fully considered but they are not persuasive.

12. In the arguments on page 3, the Applicant argues that the independent claim 1 is amended to include language which further defines the zeolite crystallites of the claimed catalyst composition to have an average crystal size that is smaller than 0.5 μm .

The Applicant's argument is not persuasive because Ballegoy discloses, "Preferably crystallites smaller than 10 μm and more preferably smaller than 1 μm are used. The practical lower limit is suitably 0.1 μmPreferably catalysts are used having a crystallite size of between 0.05 and 0.2 μm " (Page 12, lines 1-10).

13. In conclusion, the claimed invention is *prima facie* obvious over Ballegoy in view of Chen and evidenced by Young.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PREM C. SINGH whose telephone number is (571)272-6381. The examiner can normally be reached on 7:00 AM to 3:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on 571-272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/PREM C SINGH/
Examiner, Art Unit 1797